

STACKED-TYPE, MULTI-FLOW HEAT EXCHANGERS

ABSTRACT OF THE DISCLOSURE

A stacked-type, multi-flow heat exchanger includes a plurality of heat transfer tubes. Each of the heat transfer tubes includes a first tube plate and a second tube plate
5 connected to the first tube plate, such that the first tube plate and the second tube plate form a refrigerant path within the heat transfer tube. Each of the heat transfer tubes also includes an inner fin having a wave shape, positioned within the refrigerant path and extending in a longitudinal direction along the refrigerant path. Moreover, the heat exchanger includes a plurality of outer fins. The plurality of outer fins and the plurality of heat transfer tubes are
10 stacked alternately. The heat exchanger further includes a plurality of projection portions formed on the first tube plates and the second tube plates, such that the projection portions project into the refrigerant path and extend in an oblique direction relative to the inner fin. Further, the inner fin is connected to the plurality of projection portions.